



Welcome to the OARC e-Magazine

www.OgdenArc.org

FEBRUARY 2009

Next Club Meeting

3rd Saturday February 21, 2009

Topic: RF Safety by Mike Fullmer KZ70



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PREVIOUS CLUB MEETINGS

3rd Saturday January 17, 2009

When Aaron Farr W7HJK presented to OARC on the subject of "Digital TV Conversion" everyone thought that all of the high power analog TV stations in this nation would be turned off on February 17, 2009. Well, things change fast. The conversion has been postponed until June 12, 2009 to allow more time for TV viewers to get ready to receive the new digital TV signals.

If you receive your TV signals from satellite or over cable you will not be affected but if your signal originates from a set top antenna or an attic or outside antenna your TV will go dark when the dreaded day arrives unless you take action.

Unless you have one of the newer televisions designated as Digital TV or HDTV, which has an integrated digital TV tuner, you will need to purchase a digital TV converter to convert the digital TV signals back to analog TV signals in order for your older analog TV to receive any television signals.

Most all of the new DTV channels are in the UHF Low band so you might also want to consider getting a new UHF antenna to replace your old VHF or VHF/UHF antenna. You won't need your VHF antenna any longer. They say a multi-bow-tie antenna works great in this area along the Wasatch Front of Northern Utah.

Station	Network	Original Channel	Tune to Channel	RF Channel
KUTV	CBS	2	2.n	34
KTVX	ABC	4	4.n	40
KSL -TV	NBC	5	5.n	38
KUED	PBS	7	7.n	42
KUEN	PBS	9	9.n	36
KBYU-TV	PBS	11	11.n	44
KSTU	FOX	13	13.n	28
KJZZ-TV	My TV	14	14.n	46
KUPX	ION	16	16.n	29
KUEW	PBS	18	18.n	18
KUES	PBS	19	19.n	19
KTMW	Indy	20	20.n	20
KPNZ	Indy	24	24.n	24
KUCW	CW	30	30.n	48

(VHF = Channel 2 -13, UHF = Channel 14 - 69)

Government issued coupons will help defer the cost of purchasing the digital TV converter box. Boxes cost between \$50-\$70 and the coupons subsidize \$40 each toward the purchase of up to 2 converter boxes. You can apply for up to 2 coupons but only if you do not subscribe to satellite TV or Cable TV.

After the conversion is completed, the FCC plans to auction off the old UHF High-Band TV 700 Mhz frequencies (channel 70-83) to commercial businesses and public services. Yes, our dear beloved FCC is now in the business to make a buck or two on this natural RF resource.

Hams, beware! Frequencies are now a valuable commodity and we (hams) must be sure to use-em or we could lose-em.









NEXT CLUB MEETING

When: 3rd Saturday February 21, 2009

Time: 9:00 AM

Location: Riverdale Fire Station

How safe is your 'operating' environment? RF Safety Matters!

Topic: RF Safety by Mike Fullmer KZ70

Talk-in: -146.90 (pl=123)

CLUB BUSINESS

WEBER CO VE TEST SESSION RESULTS February 4, 2009

Congratulations to the following Hams that successfully tested at this VE session

•	Patrice Fourtina	KG4SYI	General
•	David L. Smith	KC7VDI	Extra
•	Mario W. Crawford	KE7IFD	General
•	Steven C. Drollinger	KF7ADD	Technician
•	Bruce M. McGraw	KF7ADC	Technician
•	David J. Snider	KF7ADE	Technician

Thanks to the following VEs Attending this session:

•	Mary Hazard	W7UE
•	Kenneth W. Wilson	N7OG
•	Larry L. Griffin	AD7GL
•	Alan R. Bryner	KK7UD
•	David H. Black	AC7QO
•	Brad Bate	N7SWW

MORE CLUB BUSINESS

OARC Technician License Classes

Dates: Thursday evenings, starting March 5th 2009

Time: 07:00 pm

Location: LDS church building, Clinton Utah

Details: see club website for last minute details

OARC Technician Licensing Class

Ham radio training

When a disaster hits and the use of traditional communication methods (cell phones/land lines/family service radios) become limited or unusable, amateur radio operators (otherwise known as Ham radio operators) can communicate with others using Ham radios. To use a Ham radio, one needs to pass a test and obtain an amateur radio license.

OARC Technician Class course and VE test session

The Ogden Amateur Radio Club is sponsoring a class to help individuals learn the information needed to obtain an amateur radio license.

The classes will be held on Thursday evenings 7:00 PM to 8:30 PM on March 5th, 12th, 19th and 26th and April 2nd and 9th, 2009. The classes will be held at the LDS church (Clinton 14th / Sunset 3rd) Ward building located at 338 W 1800 N in Clinton, Utah 84015.

The class will be completed before the Northern Utah Hamfest (see below) so that students can attend the test session within two weeks of finishing the course. The test session will be held 4th Saturday April 25th 2009 between the hours of 1:00 PM to 3:00 PM during the other hamfest activities.

OARC will also have its regular test sessions at the Weber Center on the first Wednesday in February, June and October.

ARRL/EMCOMM Utah Convention/Hamfest and VE test session

The HAM radio test/exam can be taken on 4th Saturday April 25th 2009 at the ARRL/EMCOMM Utah Convention/Hamfest located at the Browning Armory, 625 E 5300 S So Ogden Utah. Hamfest starts at 09:00 AM and the test session will be conducted between the hours of 1:00 PM - 3:00 PM.

To register for this class, or to obtain more information, please contact:

- Justin KE7ROQ at 801-719-0479, email justind@ADV-TECH.com
- Kent WA7AHY at 801-475-6282, email L7MFCC@juno.com

Additional information is available at the Ogden Amateur Radio Club web site http://www.ogdenarc.org .

FROM THE PRESIDENTS SHACK



Kent Gardner WA7AHY

I have two items to reflect on this month. The first has to do with power outages and the second with legislative thought processes.

Yesterday morning, I left my warm home and went to the dentist in the midst of a snow storm. I sat in a nice warm chair/office and listened to soothing music while the procedure was accomplished. I returned home only to find the power to the neighborhood off. I was glad that the power had not gone out while I was in the dentist chair, but was unhappy that I now had no more warm home, no more electricity to cook with or to process television imagery. I still had telephone service, but that didn't help much in warming me up. I wondered how long the power would be off and I even turned my scanner on to see if I could determine if someone had wiped out a power pole nearby.

My simple question is...how would we cope with an extended power outage; especially in the wintertime or how soon would we lapse into complacency when it came back on? It turned out that the power was restored in about an hour. An aside, my G5RV and my 80 meter loop wire antennas were really drooping with the weight of that wet snow. I had to get a stick and bang the wires to relieve the load.

Now to consider some happenings at the Utah legislative session now underway. Most of us were warned by email that Phil Riesen had proposed a bill to make it illegal to text or even use your cell phone while driving. Additionally it would prohibit the use of two way radios or even hands free cell phones while driving. I dutifully sent my district representative the ARRL's position paper. Basically it says that ham operators, snow plow drivers, taxicabs, and other two-way radio users should be exempt. Now I find out from an article in the paper that there are two more bills on the same subject. The paper mentions Lyle Hillyard's (of Logan) version. I intend to look up his legislative email address and send him the ARRL statement also. ARRL's statement supported no texting etc, but warned that absent minded language of prohibiting two way radio while driving would be detrimental to just about everyone. I suggest we all warm up our search engines and send off our feelings about these ominous sentence structures against public service radios. If you need some information let me know and I will forward the links to you.

Keep warm and safe. Speaking of safety, don't miss Mike Fullmer's program on Ham Radio Safety at the club meeting Saturday 21 Feb 09. The meeting starts as usual at 9:00 AM at the Riverdale Fire Station.

OTHER BUSINESS

Utah VHF Society Swapmeet

Date: 4th Saturday, February 28 2009

Time: 08:00 am

Location: Utah Fair Park SLC

Details: http://www.utahvhfs.org/fairpark.html

News from the UVHFS president

Mel Parkes, NM7P



Thanks to all our members!!!!

As your president I would like to take a moment to express my appreciation to all those who are members of the Society. We have experienced many issues this year that have required us to spend a great deal of funds to assist with a number of repeater site repairs, upgrades, and to build new sites. Without your support none of this would have been possible, thanks for your dues and continued membership. In addition we appreciate your membership as we have grown to the point now where we have become the largest Amateur Radio Organization in the State of Utah. Thanks again and please continue to invite and encourage your fellow hams to become part of the Utah VHF Society.

TECHNICAL TIDBIT

WHAT ARE YOU WAITING FOR? GET ON THE AIR!

Editors Note:

The rule changes took place almost two years ago, yet many hams don't realize what this means for ALL Technician Class Amateur Radio Operators. (K7HCP)

FCC's Morse Code Report and Order in WT Docket 05-235

The *Report and Order* in WT Docket 05-235 that eliminates the Morse Code testing requirement for all license classes was adopted by the FCC on December 15, 2006.

The new rules became effective at 12:01 AM Eastern Time Friday February 23, 2007.

What does WT Docket 05-235 mean for a no-code Technician?

All Technician licensees -- whether or not they have passed a Morse code examination -- will have "Tech Plus" operating privileges.

This means they will have access to all of the current VHF/UHF and above frequencies and also will have access to the Novice/Technician Plus frequencies on HF.

These include:

80 meters	3525-3600 kHz	(CW only)
40 meters	7025-7125 kHz	(CW only)
15 meters	21,025-21,200 kHz	(CW only)
10 meters	28,000-28,300 kHz	(CW, RTTY and Data – PSK31, etc)
10 meters	28,300-28,500 kHz	(CW, SSB-Fone)

The power limit is 200 Watts PEP output for Technician operators.

Technicians can upgrade to General by passing Element 3 written exam and to Amateur Extra by also passing the Element 4 written exam.

Download the latest ARRL Frequency-Band Chart from the link near the bottom of the club website home page.

I'll be listening for you on the HF bands ... de K7HCP

NEWS ARTICLES



No Interesting News this month



No Interesting News this month



California Court rules that the City of Palmdale CA must allow ham's tower.

This has been a long and difficult battle for **Alex Zubarau**, **WB6X**. He was granted a permit by the City and then after some neighbor complaints, Palmdale revoked the building permit and ordered him to remove the tower and SteppIR beam antenna. Alex complied.

Today in Los Angeles Superior Court, Alex was vindicated. **Judge David Yaffe** ruled that the City of Palmdale was wrong in forcing WB6X to remove his tower after a valid permit had been issued. Congratulations to **Len Shaffer, WA6QHD**, Zubarau's attorney.

Alex had been faced with civil penalties for each day after a City deadline if his tower was not taken down and massive legal expenses if he fought it. A dilemma that must be a ham's nightmare. I wonder if a future ruling will order the City to pay the costs to reinstall the tower and antennas.

The radio amateur community came to the rescue. Many clubs and individuals nationwide donated money for his legal costs to fight this unjust action by the City of Palmdale. Ideas were put forth by many hams and legal talent stepped forward.

The ARRL played an active part in this case. Too often I hear about what the League is not doing. This clearly demonstrates that the ARRL is an active nationwide supporter who does not receive enough thanks for their efforts. ARRL Southwestern Division Vice Director **Marty Woll, N6VI** was there when the Judge ruled in WB6X's favor today. More importantly, he and Division Director **Dick Norton, N6AA** were there, with support from headquarters, throughout this year long battle. Thanks guys.

This was a team effort by many players and the **American Radio Relay League**. http://www.arrl.org/

73 to all, Terry, K7FE Editor QRZ.COM

EDITORIAL

By Dan Romanchik KB6NU

Class Projects

I have been teaching a General Class license class for the past five years. The first year, I had five students, the next year 35! This year, I have only five again.

Not being a pedagogical genius, it never really occurred to me until last year to give my General Class students a project to work on while we slogged through the material. Last year, some of them built little QRP kits. Not only was that fun, it was educational. Some of them had never even soldered before!

Since last year's project worked out so well, I am asking this year's students to do some kind of project, but one that they choose themselves. Here's the short list that I came up with:

- * Build a kit like my students did last year.
- * Build a 2m beam. At our first meeting, one of the guys noted that while he could hear a repeater about 30 miles away from his QTH, he wasn't able to hit it with the 5/8-wavelength vertical he was using. I suggest that he build a Cheap Yagi (http://www.fredspinner.com/WOFMS/CheapYagi/vjbcy.html).
- * Download some antenna simulation software and analyze a dipole or vertical antenna. MM-ANA (http://mmhamsoft.amateur-radio.ca/mmana/index.htm) is free and looks to be a pretty good program.
- * Learn Morse Code. Being the CW geek that I am, how could I not suggest this?

I wanted to give my students a bigger choice, so I asked the readers of my blog for more suggestions:

Kenneth, W6KWF, replied, "Hands down the most useful and most successful projects I've built have been 2m J-poles. I've built both the 1/2-in. copper tubing and TV line variants, and use both as my primary antennas. The TV line one is nice because I live in an apartment, so when I need a good antenna, I tie a magnet to the top of it and stick it to my upstair neighbor's balcony. It's a very forgiving antenna."

Zeke also like the idea of building J-pole antennas. "You didn't mention the age group/groups you are working with," he said, "but have you thought about a hands-on project such as a j-pole for 2 or 6 meters. It would give them an opportunity to feel the pride that follows an involved project. Furthermore, the J-pole is a pretty good antenna."

John N8ZYA, said, "I like the [idea of learning CW].it's like learning to play the guitar or piano. A skill that can be used your entire lifetime!"

Robert suggested, "How about building a 20 meter delta loop? I am very inexperienced when it comes to antenna building, but a friend suggested this for working DX on 20 meters and it worked out really well. In fact, my first contact on it was Spain!"

I would love to offer my students even more choices. If you have a suggestion, please e-mail it to me at cwgeek@kb6nu.com. Thanks!

SPECIAL ARTICLE

If you need something this guy might have it!

http://www.vintagessb.net/k6dpz.htm













See much much more at

http://www.vintagessb.net/k6dpz.htm

FEATURE ARTICLE

Distress Beacons at 121.5 and 243 MHz Phased Out



This graphic gives an overview of how the Cospas-Sarsat system works. First, a beacon is activated due to grave or imminent danger (1). Next, the Cospas-Sarsat satellite systems receives the distress signal (2). The alert is re-transmitted to automated ground stations called Local User Terminals (LUTs) (3). Mission Control Centers (MCCs) receive the alerts from the LUTs and process the signals and them forward them to the Rescue Coordination Center (RCC) (4). The RCC verifies the distress and alerts the nearest Search and Rescue unit (5). The Search and Rescue unit goes to the distress scene (6).

As of February 1, the <u>Cospas-Sarsat</u> (Search and Rescue Satellite Aided Tracking) satellites are <u>no longer monitoring distress beacons</u> at 121.5 and 243 MHz. All mariners, aviators and individuals who use emergency beacons on those frequencies will need to switch to the newer, digital 406 MHz frequency if they want to be detected by the monitoring satellites. The National Oceanic and Atmospheric Administration (<u>NOAA</u>) claims that in 2008, beacons monitored by the Cospas-Sarsat worldwide system were responsible for almost 300 lives saved, including 203 people rescued in 65 in at-sea incidents and 12 people rescued in 7 aviation incidents.

"Over the years, many amateurs have played vital roles by monitoring frequencies that the satellites have stopped tracking," said ARRL Emergency Preparedness and Response Manager Dennis Dura, K2DCD. "While the switchover to 406 MHz just occurred, there is still 'older' equipment out in the world, so amateurs may want to continue monitoring, as they may save a person's life who doesn't have the latest gear, but is in distress and needs to be found."

According to NOAA's National Environmental Satellite, Data and Information Service (NESDIS), NOAA, the US Coast Guard, the US Air Force and NASA monitored these emergency beacons. According to NESDIS, problems in the frequency band that inundated search and rescue authorities with poor accuracy, as well as numerous false alerts that adversely impacted the effectiveness of lifesaving services, were some of the deciding factors to stop the monitoring of 121.5 and 243 MHz. The agency also acknowledged that two United Nations agencies -- the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO) -- recommended the switchover to the 406 MHz digital frequency, even though the beacons for this frequency will cost more.

Cospas-Sarsat provides a satellite based worldwide monitoring system that detects and locates distress signals transmitted by 406 MHz Emergency Locator Transmitters (ELTs, used in aviation), Emergency Position Indicating Radio Beacons (EPIRBs, used for maritime) and Personal Locator Beacons (PLBs, used by individuals). The system includes space and ground segments that process the signals received from the beacon source and forwards the distress alert data to the appropriate Rescue Coordination Center (RCC) for action.

NOAA said that the 406 MHz emergency beacons have "superior performance capabilities" as compared to the 121.5 and 243 MHz beacons, as they "transmit a stronger signal and are more accurate, verifiable and traceable," and that the 406 MHz distress signals can be "easily detected within a matter of minutes. Each 406 MHz beacon has a unique ID encoded within its signal. As long as the beacon has been registered (required by law), RCCs can quickly confirm that the distress is real, who they are looking for and where they should look. This means that a search can be launched even before a final distress location has been determined. Position accuracy means the search area is less than 2 nautical miles in radius, which decreases the amount of time SAR teams must search."

ARRL – February	2009
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ANNOUNCEMENTS

Next Club Meeting:

3rd Saturday February 21, 2009

 The Ogden Amateur Radio Club meetings are usually held on the 3rd Saturday of each month.

• Time: 9:00 AM

Location: Riverdale Fire Station

Topic: RF Safety by
Mike Fullmer KZ70

• Talk-in: -146.90 (pl 123.0)

Check OARC web site for details www.ogdenarc.org

- Please invite a friend to join you. You do not have to be a member of the club to participate in our club meetings or activities. We invite all to join us.
- If anyone is interested in doing a presentation on something or just have something unique to show at the meetings.
 Please get a hold of any of the officers and let us know.

Next Weber Co VE Test Session:

1st Wednesday June 03, 2009

 Exam sessions are held in Ogden every few months, usually the first Wednesday in February, June, and October.

Time: 05:00 PM Walk-ins allowed

Location:

WEBER CENTER 2380 Washington Blvd, Room # 112 OGDEN, UT 84401

Contact: VE Liaison:

Mary Hazard w7ue@arrl.net (801-430-0306)

Cost: \$ 15.00

Two forms of ID, one of which must be a picture ID.

For "Upgrades" bring current license and a copy of current license, and any CSCE's

Most **calculators** allowed. Calculator memories must be cleared before use.

Club Web Site

Be sure to visit our club web site.

• www.OgdenARC.org

Club membership is open to anyone interested in Amateur Radio. You do not need an amateur license to join us. Dues are used to operate the club, field day activities, and repeater equipment maintenance.

You do not need to join the club to participate with us.

Club Call Sign

Listen to the club repeaters for this very familiar CW ID. You do know Morse Code don't you?

W7SU

ARRL Field Day is held on the last full weekend of June every year.

Location may vary each year so watch this notice for details as time draws near. See you there.

OARC REPEATERS			
FREQ	CLUB	TONE	LOCATION
146.820-	OARC	123.0	Mt Ogden
448.600-	OARC	123.0	Mt Ogden
146.900-	OARC "Talk-in"	123.0	Little Mtn (w/auto patch)
448.575-	OARC	100.0	Little Mtn (w/auto patch)

OTHER AREA REPEATERS			
FREQ	CLUB	TONE	LOCATION
146.620-	UARC	none	Farnsworth Pk
147.120+	UARC	100.0	Farnsworth Pk
449.100-	UARC	146.2	Farnsworth Pk
449.500-	UARC	100.0	Farnsworth Pk
ATV	UARC	Ch-58	Farnsworth Pk
147.040+	DCARC	123.0	Antelope Isl
447.200-	DCARC	127.3	Antelope Isl
449.925-	DCARC	100.0	No Salt Lake
145.290-	UBET	123.0	Brigham City
145.430-	UBET	123.0	Thiokol
448.300-	UBET	123.0	Thiokol
146.640-	BARC	none	Logan
146.720-	BARC	103.5	Mt Logan
147.260+	BARC	103.5	Promontory Pt
449.625-	BARC	103.5	Mt Logan
			_
145.250-	WSU	123.0	* coming soon
449.250-	WSU	123.0	* coming soon
			_
145.490-	K7HEN	123.0	Promontory Pt
			-
146.920-	N7TOP	123.0	Promontory Pt
449.775-	N7TOP	123.0	Promontory Pt
			•
448.825-	IRLP/Echo	123.0	Clearfield City
449.950-	IRLP	123.0	Clearfield City
449.425-	IRLP	100.0	Nelson Peak
147.360+	Summit	100.0	Lewis Peak
147.5001	County	100.0	Levis I can
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AREA CLUB MEETINGS & WEB SITES			
CLUB	WEB SITE	DATE/TIME	LOCATION
Ogden ARC	ogdenarc.org	3 rd Saturday 09:00 am	Check OARC web site
WC ARES	ogdenarc.org/	2 nd Thursday 06:30 pm	Weber Co. Library
	join.html#ares		Ogden Utah
WC Sheriff		1 st Saturday 09:00 am	Weber Co. Sheriff Complex
Comm-O			West 12 th Street Ogden Utah
Barc	barconline.org	2 nd Saturday 10:00 am	Cache Co. Sheriffs Complex
			200 North 1400 West Logan Ut
CSERG	dcarc.net	Last Wednesday 8:30pm	Clearfield City Hall
	/ares.htm/		Clearfield Utah
Dcarc	dcarc.net	2 nd Saturday 10:00 am	Davis Co. Sheriff Complex
			Farmington Utah
NU Ares	home.comcast.	3 rd Wednesday 7:00 pm	Cache Co. Sheriff Office
	net/~noutares/		Logan Utah
Uarc	xmission.com	1 st Thursday 7:30 pm	UofU EMC Bldg Room 101
	/~uarc/		Salt Lake City Utah
Ubet	27meg.com	4th Thursday 6:30 pm	BE-Thiokol: 24 East 100 South
	/~k7ub/		Brigham City Utah
Utah DX	udxa.org	3 rd Wednesday	check web page for details
Association		check web page for details	Salt Lake City area
UvhfS	ussc.com	Each Tuesday 8:00 pm	Weekly 2 meter net
	/~uvhfs/	(refer to web site)	(no eye ball meetings)
WD Arc	westdesertarc.	1 st Tuesday 7:00 pm	Tooele County Courthouse
	org/		Tooele Utah
WsuArc	arcweber.edu	3 rd Thursday 5:30 pm	WSU Blding #4 Room ?
			Ogden Utah

LOCAL AREA NETS			
DATE	CLUB	FREQ	
Daily @ 12:30 PM mt	Utah Beehive net HF	7.272 Mhz HF LSB	
Daily @ 07:30 PM mt	Utah Code net HF	3.570 Mhz HF CW	
Daily @ 02:00 UTC	Utah Farm net HF	3.937 Mhz HF LSB	
Sunday @ 8:45 AM	Ogden Old Timers HF net	7.193 Mhz HF LSB	
Sunday @ 7:30 PM	UBET ARC	145.430 - 123.0 (training net)	
Sunday @ 8:30 PM	SATERN Net	145.900 - 123.0	
Sunday @ 9:00 PM	Morgan Co Net	147.060 = simplex	
Sunday @ 9:00 PM	UARC Info net	146.620- no PL tone required	
Monday @ 9:00 PM	2-meter SSB net	144.250 Mhz 2-meter USB	
Tuesday @ 8:00 PM	Weber ARES	448.600 - 123.0	
Tuesday @ 8:00 PM	VHF Society Swap	147.120 + 100.0	
Tuesday @ 9:00 PM	Bridgerland ARC	147.260 + 103.5	
Wednesday @ 8:00 PM	UBET ARC	145.290-, 145.430-, 448.300- (all 123.0)	
Wednesday @ 8:30 PM	CSERG	145.770 simplex	
Wednesday @ 9:00 PM	No. Utah 10m HF net	28.313 Mhz HF USB	
Wednesday @ 9:00 PM	6-meter SSB net	50.125 Mhz 6-meter USB	
Thursday @ 6:30 PM	Davis Co Elmers Net	147.040 + 123.0 New Hams	
Thursday @ 7:00 PM	Davis ARES	147.420 = simplex	
Thursday @ 8:00 PM	Weber State ARC	146.820 - 123.0 (coming soon)	
Thursday @ 8:00PM	RACES State VHF	145.490 - 123.0, 146.680 - 123.0	
		3 rd Thursday - even months only	
Thursday @ 9:00PM	Wasatch Back Net	147.360 + 100.0	
Saturday @ 8:00AM mst	RACES State HF	3.920 Mhz HF LSB	
		3 rd Saturday – odd months only	
Saturday @ 11:00AM mst	QCWA net HF	7.272 Mhz HF LSB	

OARC OFFICERS

President: Kent Gardner WA7AHY Vice Pres: Justin Doxford KE7ROQ Secretary: Maggi Campbell N7HCP Treasurer: Jeff Anderson KD7PAW

Director #1: Mike Webster N9NZ
Director #2: Beth Harrington
KE7ELF

"WATTS NEWS" e-Magazine

NL Editor: Val Campbell K7HCP

OTHER CLUB FUNCTIONS

Webmaster: Val Campbell K7HCP Board Advisor: Stan Sjol WOKP Board Advisor: Mike Fullmer KZ7O Repeater Engr: Mike Fullmer KZ7O VE Liaison: Mary Hazard W7UE

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